

INSTALLATION & SERVICE MANUAL

MODEL QLT180/1000-1, 1002-1, & 1001-1



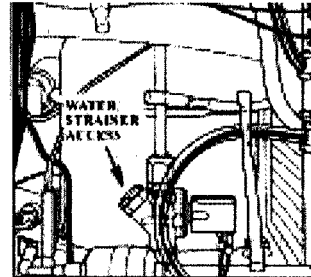
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Part No. 85312001
Revision- C
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SEMI-ANNUAL



CAUTION: The following procedures require removal of the dispenser side panel (s). Disconnect the power cord from the receptacle prior to proceeding.

- Clean Water Inlet Strainer:
 1. Remove the left side side panel from the dispense.
 2. Turn off the water supply to the dispenser.
 3. Remove the access port from the "Y" shaped solenoid located on the water inlet in the lower rear portion of the dispenser.
 4. Clean and reinstall the stainless steel water strainer.
- Clean Chassis Interior:
 1. Clean the condenser cooling fins.
 2. Clean the air inlet grille located at the base of the dispenser.
 3. Clean the interior base.
 4. Wipe the fan blade clean.
 5. Reinstall the left side panel, turn on the water supply, and plug the dispenser into the power receptacle.



TROUBLE-SHOOTING GUIDE

The following pages contain trouble-shooting information intended to aid an experienced service person in diagnosing any operational problems that may occur. If you are unable to resolve the problem after several attempts, contact the IMI Cornelius / Wilshire Inc. Technical Services department at 1-800-238-3600 (763-421-6120 outside the United States) between the hours of 8:00 AM and 5:00 PM Central Standard Time. You must have the model and serial number (located on the right side of the dispenser) prior to calling.

PROBLEM	PROBABLE CAUSE	REMEDY
Totally Inoperative	<ul style="list-style-type: none"> No power to dispenser due to tripped circuit breaker. Loose or broken power supply connection inside dispenser. 	<ul style="list-style-type: none"> Reset circuit breaker. Confirm that breaker is correct size and no other equipment is operating on the same circuit. Also confirm that supply voltage is $\pm 10\%$ of nameplate specifications. Repair connection.

No Cooling	<ul style="list-style-type: none"> Line voltage is not within $\pm 10\%$ of nameplate specifications causing compressor overload to trip. Both thermostats in OFF position. Defective compressor overload or start capacitor. Defective start relay located on upper rear shelf inside dispenser. Compressor starts but hums and trips overload. Compressor starts but does not switch off of start winding. Compressor short cycles on overload. 	<ul style="list-style-type: none"> Contact an electrician. Turn ON thermostats and recalibrate the temperatures to $40^{\circ}\text{F} \pm 5$ (4.5°C). Replace. There should be line voltage on the black wire of the relay when there is line voltage present on the orange OR yellow wire. Replace relay if it fails this test. Seized or shorted compressor, replace. Relay or compressor is defective. Test and replace faulty item. Excessively high discharge pressure due to restricted condenser or inoperative condenser fan motor.
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No Cooling (Cont'd)	<ul style="list-style-type: none"> • Refrigerant leak. 	<ul style="list-style-type: none"> • Repair leak, evacuate and recharge system.
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No water dispensed, concentrate only.	<ul style="list-style-type: none"> • No water to dispenser. • Water supply line inside refrigerated cabinet disconnected from pump platform. • Water solenoid located on pump platform clogged or defective. • Main water solenoid/strainer located at base of dispenser is clogged, binding or defective. • No water dispensed, concentrate only. • Water supply pressure is greater than 100 psi (7 bar) • Freeze-up of water coil or concentrate chamber. 	<ul style="list-style-type: none"> • Restore water. • Reconnect. • Disassemble and clean solenoid. Replace if necessary. • Remove and clean strainer. Confirm 28VDC is present at solenoid during dispense. Confirm solenoid coil is not open. Disassemble and clean solenoid. • Add external regulator and lower pressure to 50 psi (3.5 bar). • Unplug dispenser and allow 2–4 hours to thaw. Water or concentrate thermostat set too low, recalibrate to 40°F ± 5 (4.5°C). • Defective water or concentrate thermostat, replace. Refrigerant solenoid stuck open or not closing fully. Evacuate system, replace solenoid valve and recharge.
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No water and no concentrate, refrigeration is working.	<ul style="list-style-type: none"> • Service switch located under drip tray in OFF position. • Door switch open. • 6.25 amp fuse inside front electrical box blown. • No output from transformer located on rear upper shelf. 	<ul style="list-style-type: none"> • Turn on switch. • Door switch must be closed in order to operate pump. Check switch operation and replace if necessary. • Replace with 6.25 amp, 250VAC slow blow fuse and test. • Confirm transformer output by measuring for 26VAC at fuse. Replace transformer if necessary.
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No water and no concentrate, refrigeration is working (Cont'd).	<ul style="list-style-type: none"> • Defective voltage regulator board (VRB) located inside front electrical box. 	<ul style="list-style-type: none"> • Measure across the blue and black wire located in the upper left corner of the board. There should be 28VDC present when the dispense button is pressed. Replace VRB if necessary.
	<ul style="list-style-type: none"> • Defective portion control board. 	<ul style="list-style-type: none"> • Disconnect wire harness from rear of portion control, close door switch and short the orange and black wires together on the harness. If unit dispenses portion control board is defective. If it does not dispense the voltage regulator board is defective.

No concentrate dispensed, water only.	<ul style="list-style-type: none"> • Dispense tube not fully engaged into receptacle on concentrate pouch. 	<ul style="list-style-type: none"> • Refer to <i>Concentrate Loading</i> section of this manual.
	<ul style="list-style-type: none"> • Dispense tube disconnected from mixing chamber. 	<ul style="list-style-type: none"> • Refer to Concentrate Loading section of this manual.
	<ul style="list-style-type: none"> • Slide block on pump in open position. 	<ul style="list-style-type: none"> • Close and lock the slide block. Refer to Concentrate Loading section of this manual.
	<ul style="list-style-type: none"> • Switch on pump platform in FLUSH position. 	<ul style="list-style-type: none"> • Move switch to RUN position.
	<ul style="list-style-type: none"> • Concentrate too cold, no properly thawed. 	<ul style="list-style-type: none"> • Concentrate should be 35–40° F (1.7–4.5° C) prior to loading.
	<ul style="list-style-type: none"> • Defective pump motor. 	<ul style="list-style-type: none"> • Replace pump motor.

Excessive remnant left in empty concentrate pouch.	<ul style="list-style-type: none"> • Concentrate pouch improperly thawed. 	<ul style="list-style-type: none"> • Concentrate should be 35–40° F (1.7–4.5° C) prior to loading.
	<ul style="list-style-type: none"> • Concentrate pouch and/or dispense tube improperly installed. 	<ul style="list-style-type: none"> • Refer to <i>Concentrate Loading</i> section of this manual.

Concentrate refill light comes on prematurely.	<ul style="list-style-type: none"> • Concentrate pouch improperly thawed. 	<ul style="list-style-type: none"> • Concentrate should be 35–40° F (1.7–4.5° C) prior to loading.
	<ul style="list-style-type: none"> • Concentrate pouch and/or dispense tube improperly installed. 	<ul style="list-style-type: none"> • Refer to <i>Concentrate Loading</i> section of this manual.

Concentrate refill light comes on prematurely (Cont'd).	• Loose wiring.	• Check wiring connections between the pump motor and the VRB board.
	• Bad VRB board.	• Replace VRB board.
	• Bad pump motor.	• Replace pump motor.

Concentrate refill light does not come on at all.	• Pump improperly locked or pump is open.	• Close and lock pump.
	• Run/flush switch is in the FLUSH position.	• Move switch to the RUN position.
	• Improperly loaded tube.	• Refer to concentrate loading section of this manual.
	• Bad VRB board.	• Replace VRB board.
	• Bad portion control.	• Replace portion control.

Warm Drink	• Incoming water supply too warm.	• Optimum performance is achieved when the dispenser utilizes water from a pre-cooler.
	• Ambient air too warm.	• Relocate dispenser.
	• Excessive demand on dispenser.	• Add water pre-cooler or second dispenser.
	• Dirty condenser coil.	• Clean condenser coil.
	• Inoperative condenser fan.	• Replace condenser fan motor.
	• Defective water thermostat.	• Replace thermostat.
	• Loss of refrigerant charge due to leak in system.	• Repair leak and recharge system.

Water continuously drips from nozzle when in OFF mode.	• Main water solenoid at base of unit or water solenoid on pump platform not shutting off tightly.	• Clean solenoid(s), replace parts as necessary.
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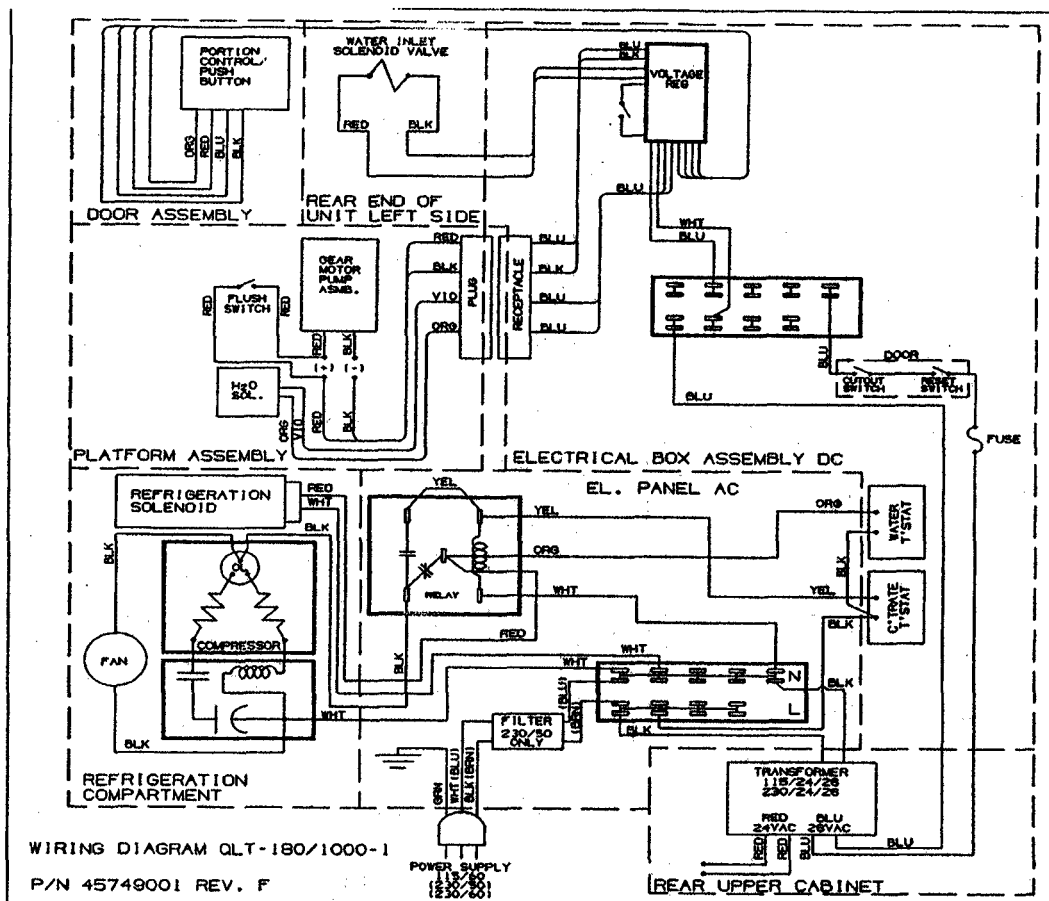
No Flush Cycle	• Run/Flush switch on pump platform in Run mode.	• Move switch to Flush position.
	• Defective Run/Flush switch on pump platform (concentrate continues to dispense while in Flush mode).	• Replace Run/Flush switch.

Concentrate warm, water cold	• Concentrate thermostat is turned off or not calibrated properly.	• Calibrate to be 35–40°F (1.7–4.5°C).
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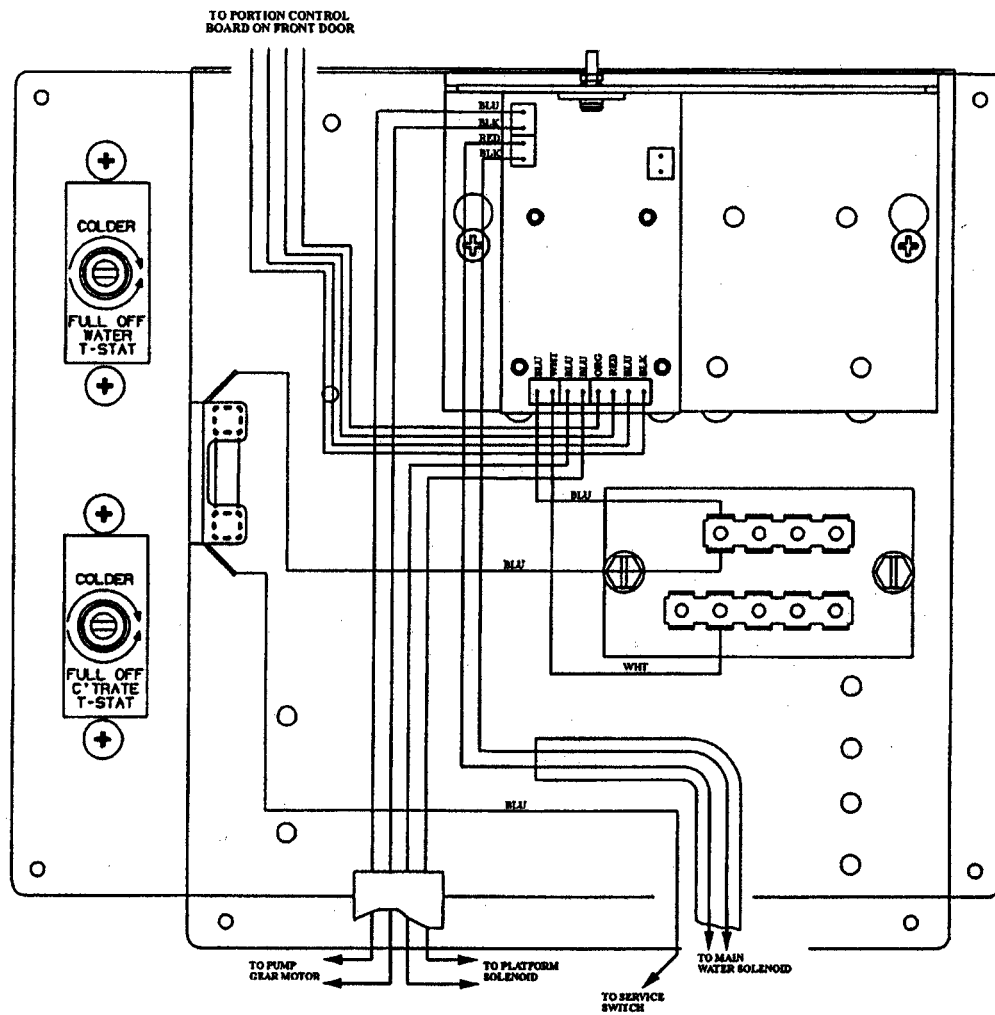
Concentrate warm, water cold (Cont'd).	<ul style="list-style-type: none"> • Concentrate thermostat defective (stuck open). • Defective start relay located on upper rear shelf inside dispenser. • Loss of refrigerant charge due to leak in system. 	<ul style="list-style-type: none"> • Replace thermostat and calibrate to 35–40°F (1.7–4.5°C). • There should be line voltage on the black wire of the relay when there is line voltage present on the orange OR yellow wire. Replace relay if it fails this test. • Repair leak and recharge system.
Brix Problem	<ul style="list-style-type: none"> • Water supply pressure too low, less than 40 psi (2.8 bar) flowing or water pressure fluctuates sharply. • Water flow control binding or spring is defective. • Improperly thawed concentrate. Brix changes as the concentrate temperature changes (concentrate becomes thinner as temperature rises). 	<ul style="list-style-type: none"> • Correct water supply problem to ensure a constant 40 psi (2.8 bar) flowing to the dispenser. • Clean and/or replace parts as necessary. • Concentrate should be 35–40°F (1.7–4.5°C) prior to loading.
Pump Inoperative	<ul style="list-style-type: none"> • Pump motor defective. • No power to transformer or no 28VAC output from transformer. • Defective voltage regulator board (VRB) located inside front electrical box. 	<ul style="list-style-type: none"> • 28VDC should be present at pump motor during dispense. If voltage is present and motor does not start, replace pump motor. • Confirm transformer has line voltage present on primary side. If no 28VAC output from the secondary replace transformer. • Measure across the blue and black wire located in the upper left corner of the board. There should be 28VDC present when the dispense button is pressed. Replace VRB if necessary.

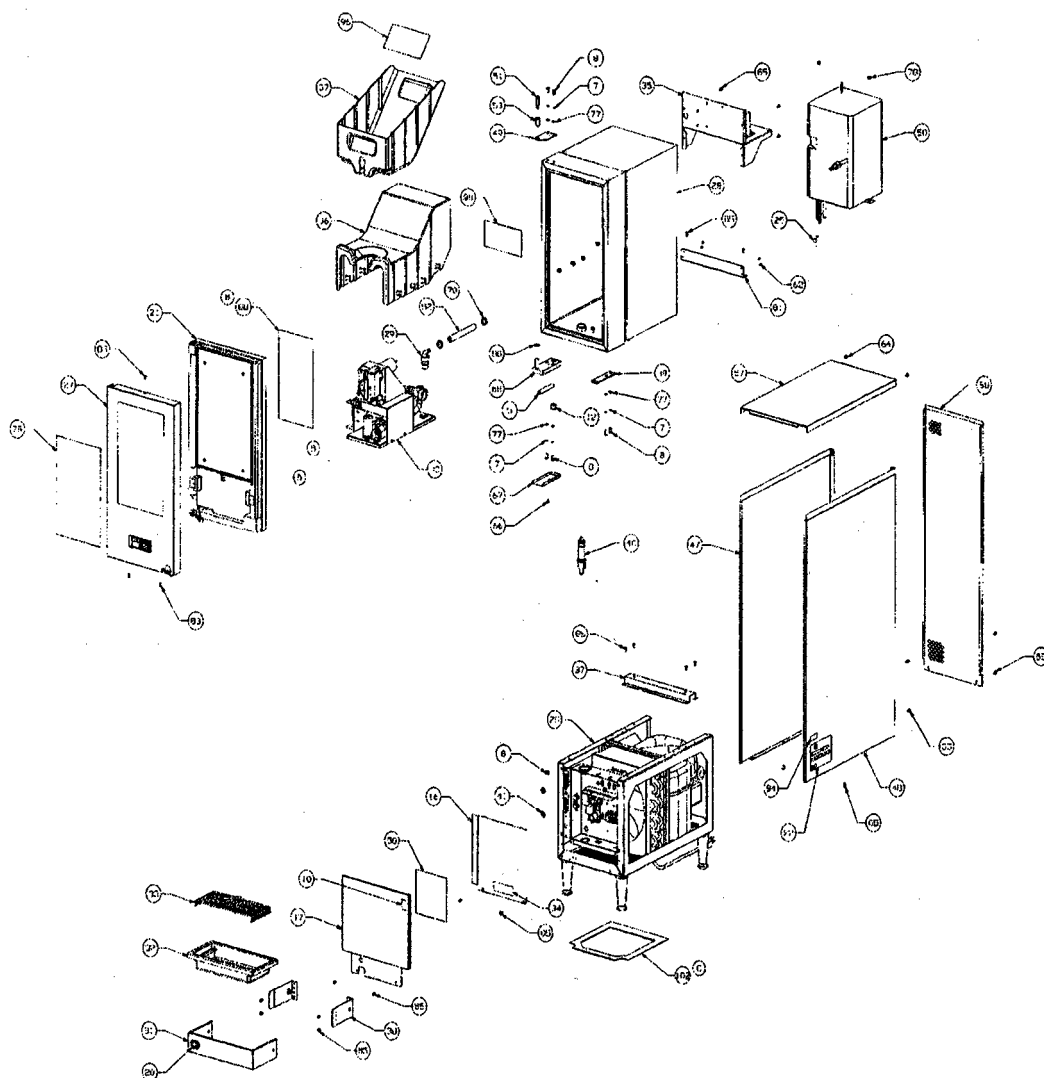
Pump Inoperative (Cont'd).	<ul style="list-style-type: none">• Defective portion control board.	<ul style="list-style-type: none">• Disconnect wire harness from rear of portion control, close door switch and short the orange and black wires together on the harness. If unit dispenses portion control board is defective. If it does not dispense the voltage regulator board is defective.
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Machine continues to dispense after dispense button is released or dispenses without operator input.	<ul style="list-style-type: none">• Portion control pad stuck in on position.• Relay on voltage regulator board (VRB) stuck on.	<ul style="list-style-type: none">• Disconnect the wire harness from the rear of the portion control and close the door. If unit does not dispense on its own the portion control is bad (stuck on).• Disconnect the 4-wire harness from the lower right corner of the VRB. If the unit continues to dispense on its own the VRB is defective (relay stuck on).
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System Wiring Diagram





Final Assembly
P/N 45100401 (115VAC)
P/N 45100402 (230VAC)

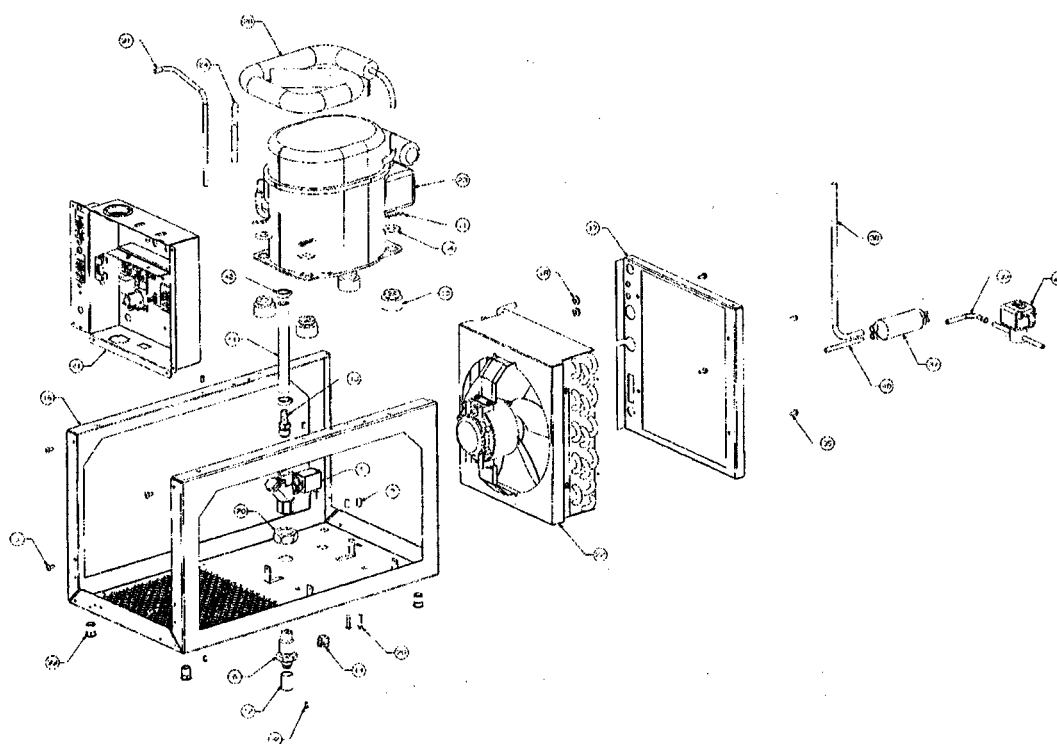
Item Number	Part Number	Description
1	45551	Pouch Holder, Plastic
2	45538100	Shelf, Plastic
3	455091000	Platform Assembly, QLT 180 w/Sold Out Feature
4	45155001	Grill, Drip Pan
5	45129001	Drip Pan
6	45152	Bracket, Drip Pan
7	49157	Bushing – Upper Hinge
8	49155	Shoulder Bolt – 1/4-20 X 1 3/16" S.S.
9	49154	Upper Hinge Plate
11	45087	Hinge – Top Cover
12	45088	Hinge – Bottom Cover

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Item Number	Part Number	Description
13	96561	Door Support Plate
14	45123	Static Mixer
15	31525037	O-Ring, Mixing Nozzle
16	48808001	Dispense Nozzle
17	45159	Splash Panel
18	07061001	Screw, #10 Type "F" HHWF, 3/8" Long
19	46546	Arm Assembly
20	45749001	Wiring Diagram Label
21	46422	Shock Hazard Label
22	45107	Electrical Box Cover
23	0704001	Screw, #8-32 Type "F", 3/8" Long
24	45028	Transformer, 115VAC
	45028001	Transformer, 230VAC
25	45109	Rear Electrical Box
26	45187	Frame/Inner Liner Bracket
27	45151	Water Coil Bracket
28	37958	Adjustable Leg
29	45165	Water Coil Assembly
30	45199	Top Panel
31	45125	Rear Panel
32	0704101	Screw, #8-32 X 3/8" Long, THM
33	7245444	Left Side Panel
34	7245443	Right Side Panel
35	470725	Hole Plug



Refrigeration & Frame Assembly
P/N 45101004 (115VAC)
P/N 45101005 (230VAC)

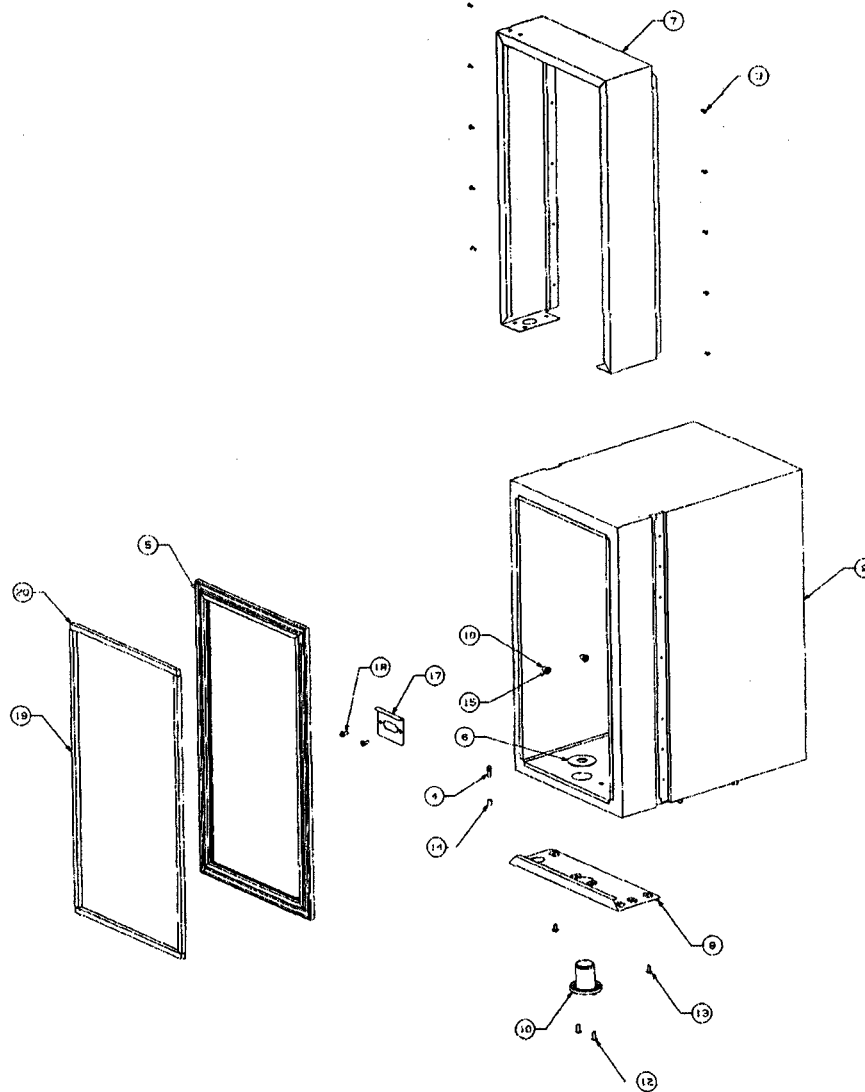
Item Number	Part Number	Description
1	289521	Screw, #8-32 X 3/8" Type "F" HHS, Zinc
2	30041001	Bulkhead Fitting
3	638004442	Solenoid Spacer
4	0704001	Screw, #8-32 X 3/8" Type "F" BH
5	45091001	Water Solenoid Valve
6	08467	Compressor Mounting Grommet
7	08474	Spring Clip
8	2124713	Union – Half, 0.38MFT X 0.38MP
9	7221320	Strain Relief Bushing, 0.695 Dia.
10	45105	Frame Weldment
11	0702609	Screw, #8-32 X 3/4" BHMS
13	03824001	Jam Nut, 7/8 – 14 Hex
14	45104002	Electrical Box Assembly
15	45010 (see note)	Compressor, R-134a, 115VAC, 60Hz.
*	45010001	Compressor Overload, 115VAC, 60Hz.
*	45010002	Compressor Relay, 115VAC, 60Hz.
*	45010003	Compressor Start Capacitor, 115VAC, 60Hz.
*	45054	Compressor, R-134a, 230VAC, 50Hz.
*	45054001	Compressor Overload, 230VAC, 50Hz.

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Item Number	Part Number	Description
*	45054002	Compressor Relay, 230VAC, 50Hz.
*	45054003	Compressor Start Capacitor, 230VAC, 50Hz.
16	44913289	Compressor Discharge Tube
17	44926224	Compressor Charge Tube
*	45073	Filter Dryer
18	45169	Switch & Mounting Bracket Assembly
19	45128	Heat Exchange Assembly, 115VAC, 60Hz.
	45128001	Heat Exchange Assembly, 230VAC, 50Hz.
20	46384	Power Cord Assembly, 115VAC, 60Hz.
	46384001	Power Cord Assembly, 230VAC, 50Hz.
21	45373010	Refrigerant Solenoid Valve, 115VAC, 60Hz.
	45373020	Refrigerant Solenoid Valve, 230VAC, 50Hz.
*	45175001	Fan Motor Assembly, 115VAC (includes items 23–29)
*	45175002	Fan Motor Assembly, 220VAC (includes items 23–29)
23	0726802	Tinnerman Nut
24	45149	Fan Motor Bracket
25	48004	Fan Motor, 115VAC, 60Hz.
	48013	Fan Motor, 230VAC, 50Hz.
26	45168	Fan Blade
27	41757	Washer
28	96285001	Screw, #8–32 X 3/8" Type "T", HH, Slotted
29	45163	Condenser Assembly

* Not Shown

NOTE: Start components are supplied with the compressor.



Upper Cabinet Assembly

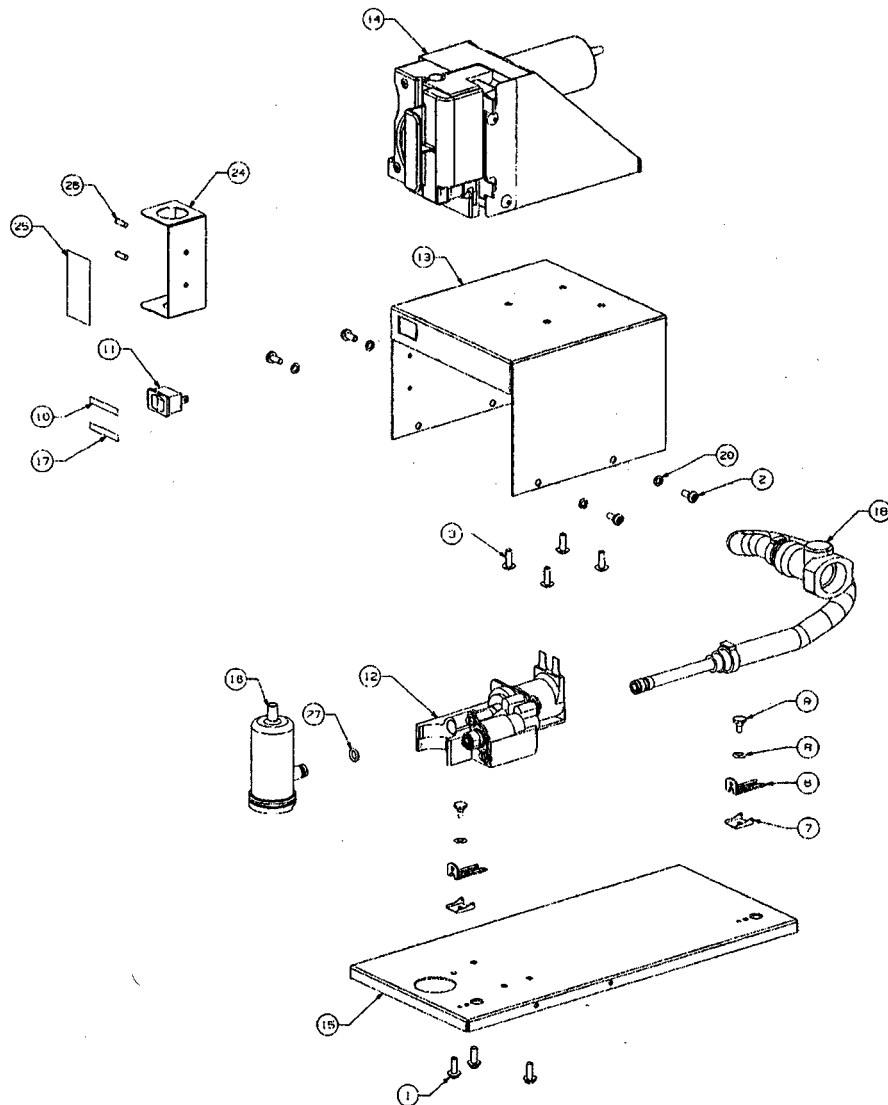
P/N 45103

Item Number	Part Number	Description
1	45167	Inner Liner Assembly – Foamed
2	45141	Front Wrapper
3	45142	Front Wrapper Bottom
4	45051	Latch Stud, #10–32 THRD S.S.
5	45119	Liner Gasket
6	0734801	Rivet, 0.125 X 0.375 X 0.26
7	45027001	Nozzle Bushing
8	0704105	Screw, 8–32 X 1/2" THMS S.S.
9	0704106	Screw, 8–32 X 1/4" THMS
10	638004441	Lower Spacer

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Item Number	Part Number	Description
11	0702609	Screw, 8-32 X 3/4" BHMS
12	46366	Bushing
13	45132	Platform Connector Bracket
14	0704001	Screw, 8-32 X 3/8" Type "F" BH
15	47121	Door Magnet – sold in bulk, 56.6" (143.5cm) required per unit
*	11761	Door Wire Harness Assembly

* Not Shown



Platform Assembly
P/N 45509100

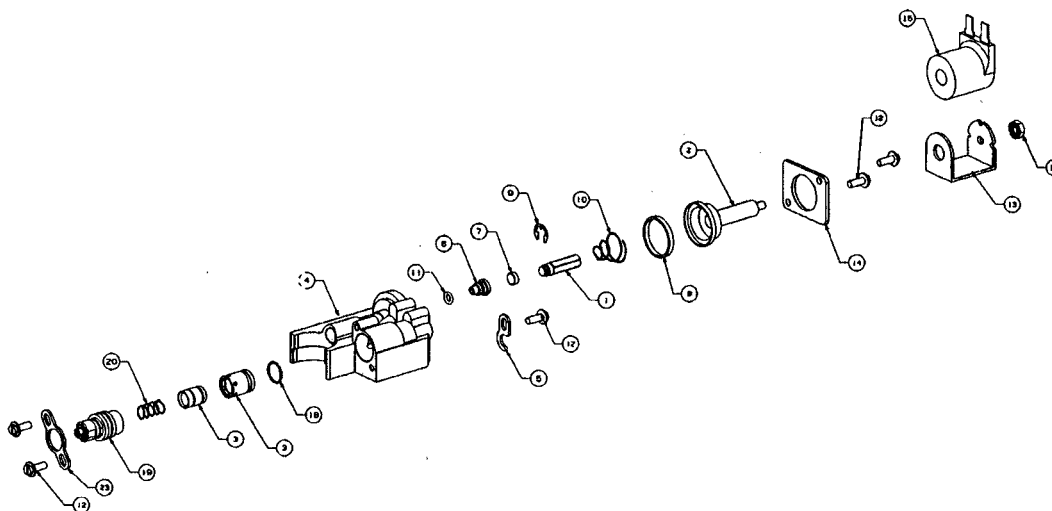
Item Number	Part Number	Description
1	07032001	Screw, #8-32 X 7/16" Type "25" HHWF S.S.
2	0704001	Screw, #8-32 X 3/8" Type "F" BD HD
3	0704105	Screw, #8-32 X 1/2" THMS S.S.
*	11858	Wire Assembly, Blue
*	11877	Wire Assembly, Red
6	45046	Latch - #2 Medium S.S.
7	45047	Latch Guide, #2 Medium
8	45048	Washer, #2
9	45049	Rivet, 3/8" Dia. HD S.S.
10	45283	Rubber Bushing w/Nut Insert
11	45432	Sealed Rocker Switch
12	45508100	Valve Block Assembly

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Item Number	Part Number	Description
13	45510	Pump Bracket
14	45514100	Pump Assembly
15	45516	Platform
Note 16	45521100	Mixing Chamber Assembly (includes O-Ring p/n 31525-003)
17	45541	Run/Flush Label
18	45723001	Tube Assembly
19	0730404	#8 Lock Washer, External Tooth
20	45568	Label, Hydrometer Holder
21	0710901	Pop Rivet, Close End
22	45567	Hydrometer Holder
*	45197	Hydrometer
*	11886100	Platform Wire Harness Assembly

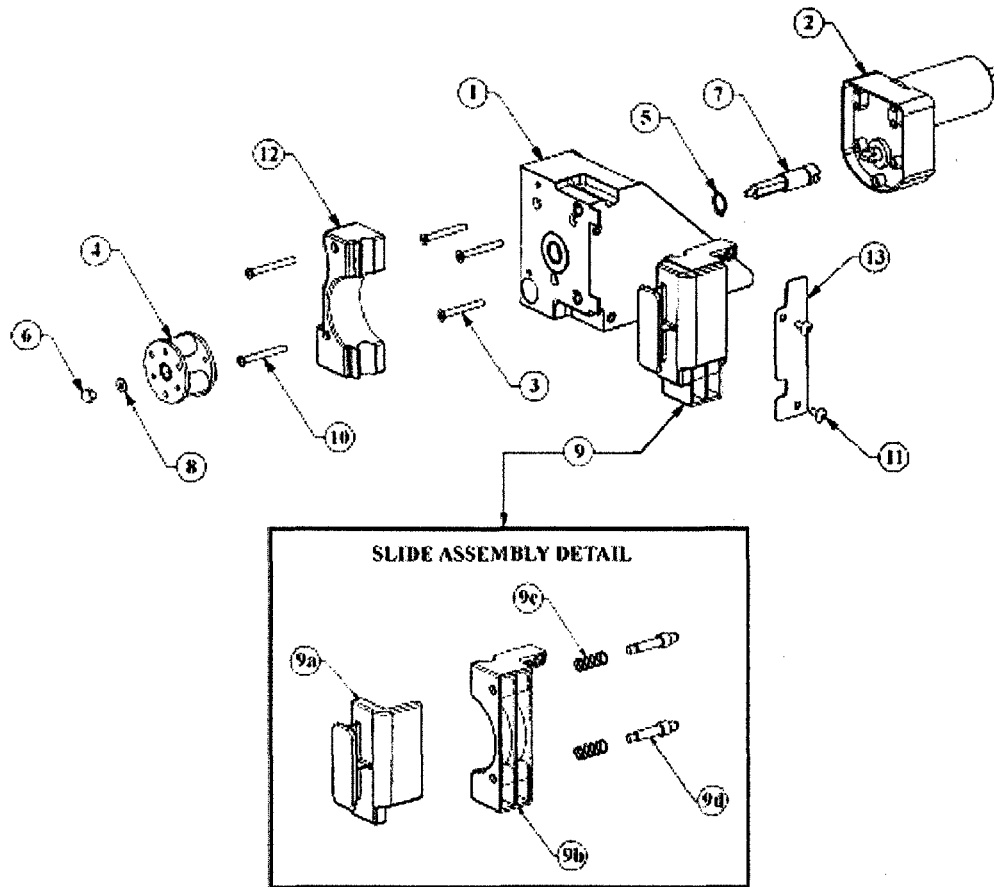
* Not Shown

Note Item 16, Mixing Chamber Assembly has been changed to part number 720531819 and is now clear in color rather than white.



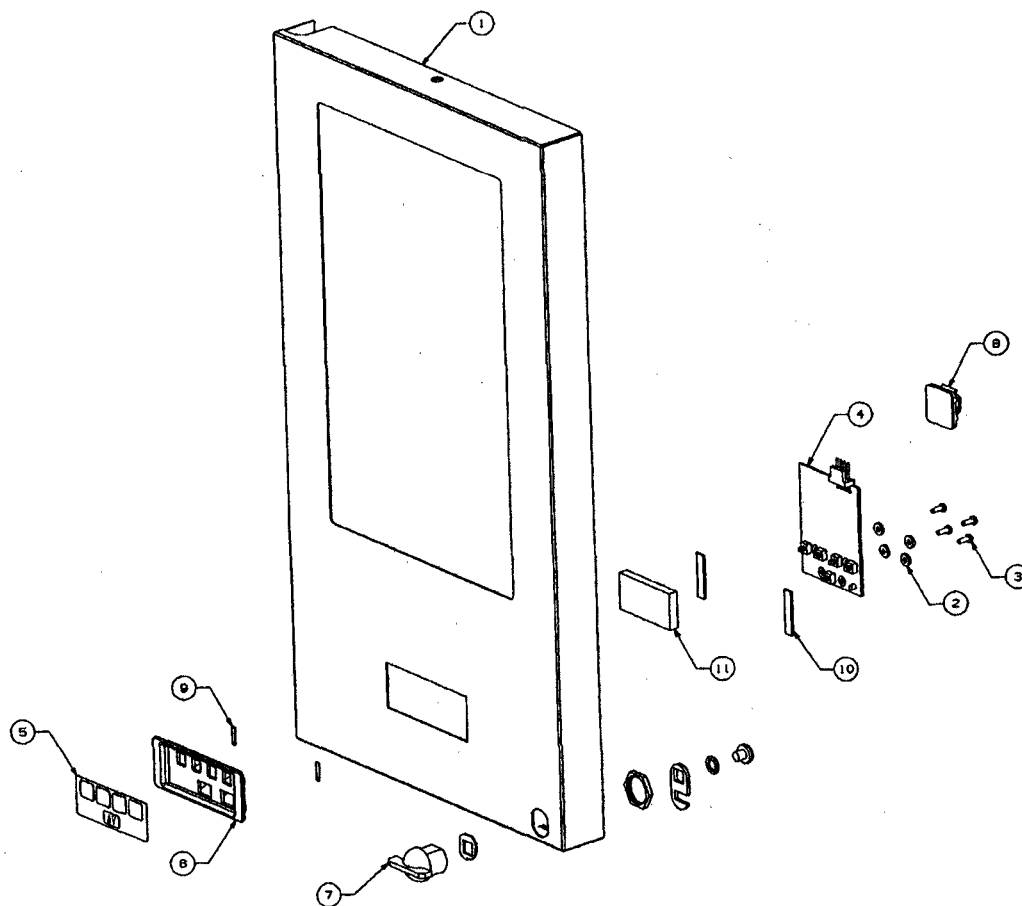
Valve Block Assembly
P/N 45508100

Item Number	Part Number	Description
1	45506100	Valve Block
2	7222081	Hold Down Washer
3	49612	Water Valve Port
4	18071	Water Armature Seat
5	7215323	Armature
6	7215321	Retaining ring, 0.242" ID
7	18367	Coil Spring
8	31525020	O-Ring, 5/16" O.D. X 0.176" I.D.
9	19695001	Guide
10	18070	Rubber Gasket, 1.055" Dia.
11	45518	Valve Block Bracket
12	07032001	Screw, #8-18 X 7/16" Type "25" HHWF S.S.
13	16779003	Solenoid "C" Frame
14	48520001	24VDC Coil
15	0720406	Nut, #10-32 KEPS
16	60281001	Ceramic Sleeve
17	60280002	Ceramic Piston
18	31525060	O-Ring, 0.539" X 0.459" X 0.875" O.D.
19	48978	Flow Control/Bonnet Assembly
20	48258005	Spring



**Pump Assembly
P/N 45514100**

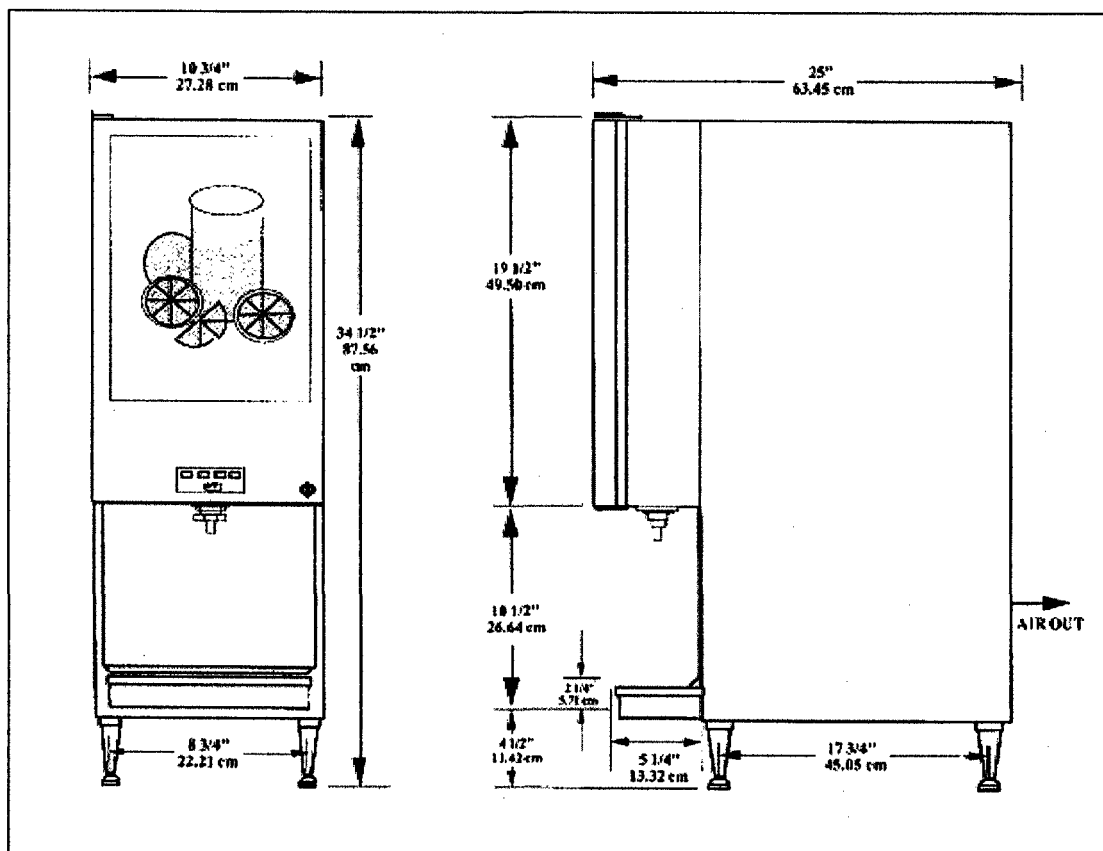
Item Number	Part Number	Description
1	45512100	Pump Body Assembly
2	45016001	Pump Gear Motor
3	0702903	Screw, #8-32 X 1 1/4" FHMS
4	45525	Rotor Assembly (Thick wall)
5	7245527	Retaining Ring
6	45529	Rotor Acorn Nut, #8-32
7	7245526	Pump Shaft
8	45554	Nylon Washer
9	45553	Slide Assembly
9a	45523100	Slide Fastening Block Assembly
9b	45515100	Pump Block Slide
9c	45531	Spring
9d	45532	Locking Pin
10	07015002	Screw, #8 X 1 1/2", 18-8 S.S. HILD
11	0704101	Screw, #8-32 X 3/8" Type "F" BH S.S.
12	45511100	Tube Guide
13	45536100	Slide Stop



Door Assembly
P/N 45550

Item Number	Part Number	Description
1	45485001	Door Cover, Stainless Steel
2	07301029	Nylon Flat Washer, 0.312" O.D. X 0.125" I.D.
3	0712901	Screw. #4 Type "B" BH
4	49280101	Portion Control Circuit Board
5	49231	Overlay
6	45398	Portion Control Bezel
7	47013	Door Latch Assembly
8	04037	Cable Clip
9	45609	Tape, Bezel
10	45627	Shim, Bezel

UNIT SPECIFICATIONS



NAMEPLATE DATA: Model QLT180/1000-1, 115VAC, 9.43 amps, 1 phase 60 hertz, 6.25 oz. (155g) R-134a refrigerant. Model QLT180/1002-1, 230 VAC, 5 amps, 1 phase, 50 hertz, 6.25 oz. (155g) R-134a refrigerant. Model QLT180/1001-1, 220VAC, 5 amps, 1 phase, 60 hertz, 6.25 oz. (155g) R-134a refrigerant. Test pressure: High side 250 psi (17.01 bar). Low side 140 psi (9.5 bar).

CONCENTRATE STORAGE: One 1.6 gallon (6 liter) disposable pouch.

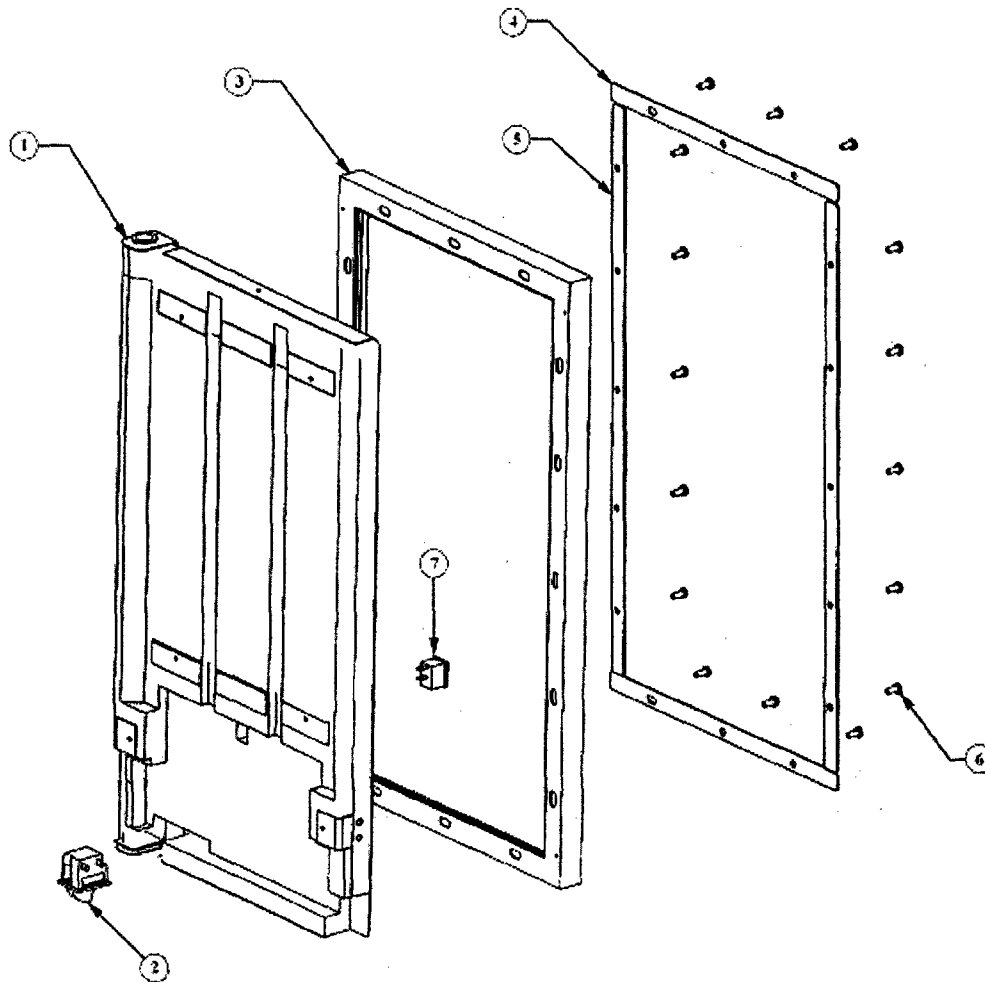
CLEARANCE RECOMMENDED: 12" (30.48 cm) on top and 4" (10.16 cm) required in back for air circulation if sides are blocked off. If sides are open only 2" (5.08 cm) are required in back. Space between bottom of the unit and counter top cannot be obstructed in foot print area.

ELECTRICAL CONNECTION: 6 ft. long (1.83 m) power cord with 3-prong plug attached to dispenser (115 volt models). Export voltages (230 volt, 50 hertz) shipping to Europe have Std. Euro-plug. All others have line cord less plug.

POWER SUPPLY: 15 amps at 120 volts, 10 amps at 230 volts, or 10 amps at 220 volts.

WATER CONNECTION: 3/8 in. (.95 cm) SAE male flare fitting on dispenser.

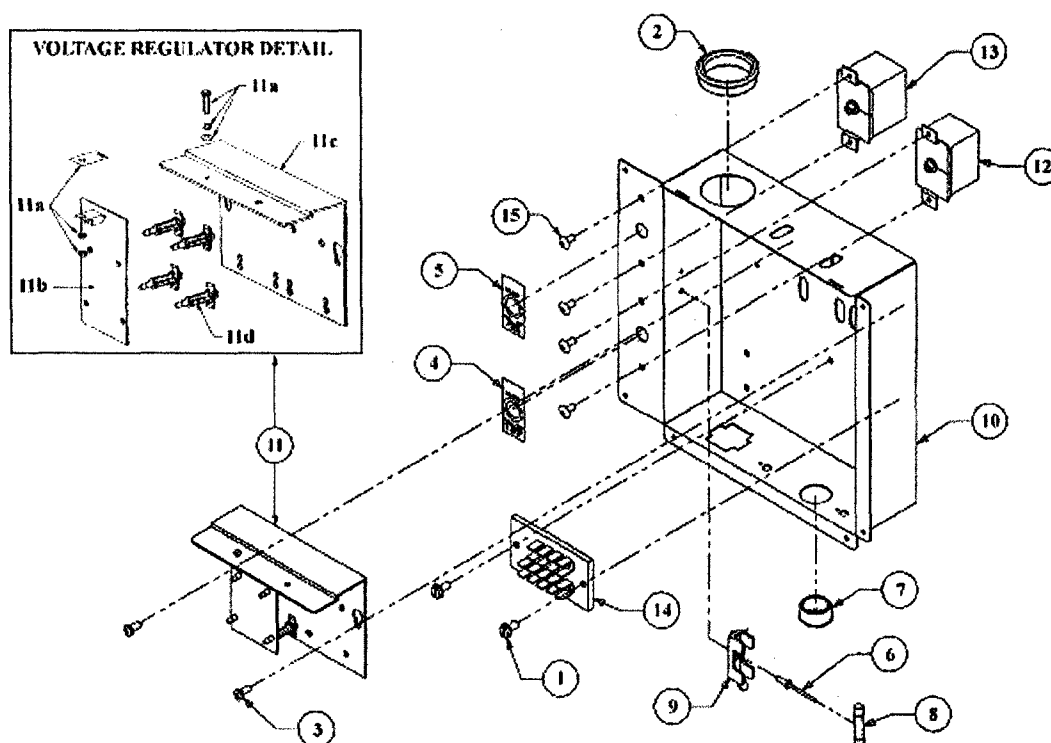
WATER SUPPLY REQUIREMENTS: 100 psi (7 bar) maximum static pressure. 40 psi (2.8 bar) minimum dynamic pressure; i.e., flowing pressure measured at dispenser water inlet with 3.0 ounces (88.7 ml) per second water flow.



**Rear Door Assembly
P/N 45241001**

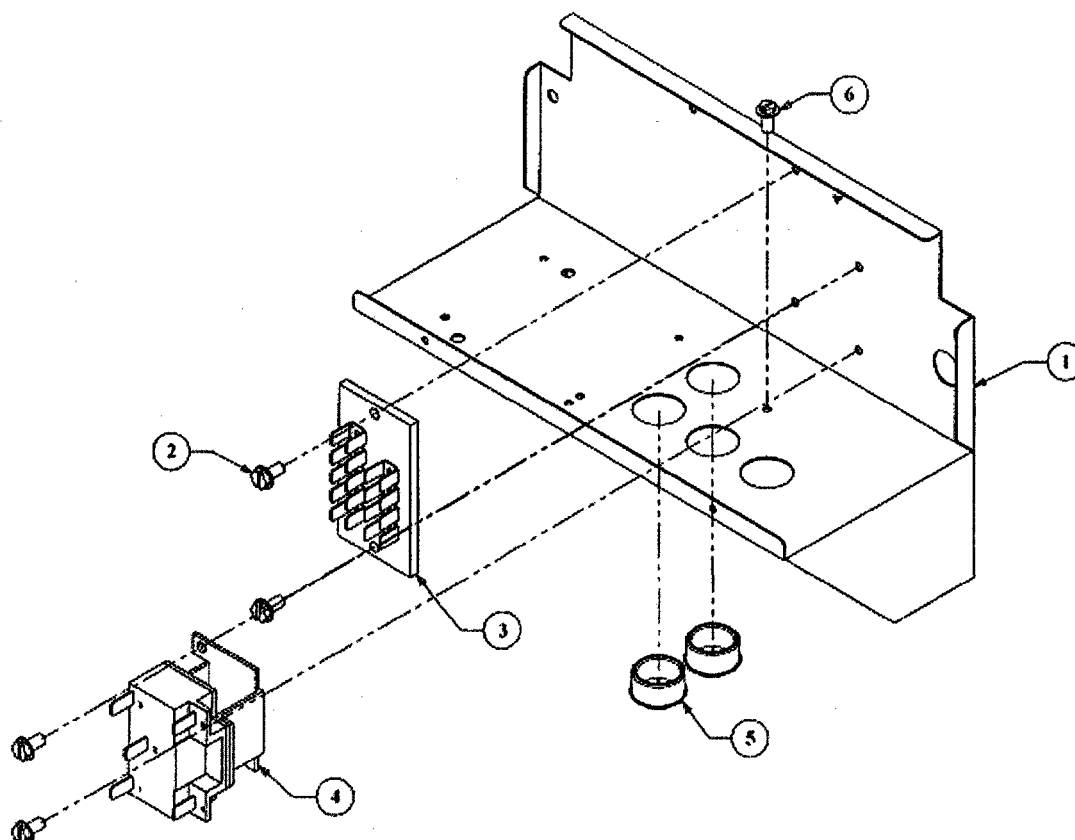
Item Number	Part Number	Description
1	45281	Rear Door Panel, Foamed
2	7233023	Safety Switch
3	7245120	Magnetic Door Gasket
4	45282	Door Gasket Mounting Strip, Top/Bottom
5	45383	Door Gasket Mounting Strip, Sides
6	0704001	Screw, #8-32 X 3/8" Long, Type "F" BH S.S.
7	45432	Rocker Switch
*	11825	Wire Harness
*	45556	Label – Product Loading Instructions
*	45556001	Label – Cleaning Instructions
*	42651010	Door Insulation

* Not Shown



Electrical Box Assembly
P/N 45104002

Item Number	Part Number	Description
1	07061001	Screw, #10 X 3/8" Type "F" HHWF
2	0733903	Snap Bushing
3	0704001	Screw, #8-32 X 3/8" Type "F" BDHD
4	46424	Concentrate Thermostat Label
5	46423	Water Thermostat Label
6	0734801	Pop Rivet
7	0735201	Universal Bushing
8	59328001	Fuse, 6.25 Amp, 250VAC
9	45059	Fuse Holder
10	45106	Electrical Box
11	45138001	Voltage Regulator Assembly
11a	45004	Mounting Hardware Kit
11b	45559	Voltage Regulator Circuit Board
11c	45162	Bracket
11d	45056	Support
12	46306	Concentrate Thermostat
13	46307	Water Thermostat
14	49273	Terminal Board
15	348871	Screw, #8-32 X 1/4" TH CAD PLT BRS



Rear Electrical Box Assembly
P/N 45109

Item Number	Part Number	Description
1	45110	Electrical Bracket Assembly
2	07061001	Screw, #10 X 3/8" Type "F" HHWF
3	49273	Terminal Board
4	46308	Starting Relay, 115VAC, 60Hz.
	463081	Starting Relay, 230VAC, 50Hz.
5	0735201	Universal Bushing
6	07049001	Screw, #8 X 3/8" Type "F" Ground
*	11754	Ground Wire Assembly
*	96574	Relay Wire Assembly
*	33133	Twin Terminal Adapter

* Not Shown

Recommended Spare Parts List
Wilshire QLT Series Juice Dispenser – 115VAC & 230VAC
(based on 10 machine)

PART NO.	DESCRIPTION	QTY
0712901	Screw, #4 Type "B" (Secures Portion Control Board)	8
7215321	Ring – Retaining – Water Solenoid	2
7215323	Armature – Water Solenoid	1
18070	O–Ring (for water solenoid guide)	2
18071	Seat, Armature – Water Valve	2
18367	Spring, Coil S/S – Water Solenoid	2
19695001	Guide, Water Solenoid	1
31525037	O–Ring – Dispensing Nozzle	2
7233023	Safety Switch (underside of door)	1
45003001	Nozzle, Dispensing w/ O–Ring	1
45559	Voltage Regulator Board	2
45016001	Motor, Pump	2
45028	Transformer, 115VAC	1
45028001	Transformer, 220VAC	1
45010001	Overload, Compressor, 115VAC	1
45054001	Overload, Compressor, 220VAC	1
45010002	Relay, Compressor, 115VAC	1
45054002	Relay, Compressor, 220VAC	1
45010003	Capacitor, Compressor, 115VAC	1
45054003	Capacitor, Compressor, 220VAC	1
45091001	Main Water Solenoid Valve	1
45123	Mixer, Static, Dispensing Nozzle	1
45175001	Fan, Motor, & Bracket Assembly, 115VAC	1
45175002	Fan, Motor, & Bracket Assembly, 220VAC	1
45432	Flush/Inner Door Switch	1
45521100	Mixing Chamber Assembly w/31525–003 O–Ring	1
7245526	Pump Shaft	1
7245527	Retaining Ring (for pump shaft)	1
45551	Pouch Holder, McDonald's	2
45553	Pump Slide Assembly	1
46306	Thermostat, Concentrate	1
46307	Thermostat, Water	1
46308	Relay – Starting, 115VAC	1
463081	Relay – Starting, 220VAC	1
48520001	Water Coil, 24VDC	1
48978	Flow Control/Bonnet Assembly	2
48979103	Spool & Sleeve Asmb w/31525–060 O–Ring	2
49231	Overlay (SM, MED, LRG, XLRG, Cancel/Pour)	2
49280101	Portion Control Board	2
59328001	Fuse, 6.25 Amp, 250VAC	4

IMI CORNELIUS INC.

Certificate of Warranty

Wilshire QLT180/1000-1, 1002-1

ONE YEAR LIMITED PARTS AND LABOR EQUIPMENT WARRANTY

IMI Cornelius Inc. warrants to the original commercial purchaser/user, that any commercial product of its manufacture bearing the name Wilshire will be free from defect in material and/or factory workmanship, and that if properly installed, maintained, and serviced in accordance with the *Service Manual* furnished with the product, it will perform adequately under normal use. This product warranty shall be effective for a period of one year from the date of original installation or 15 months from the date of original shipment by IMI Wilshire, whichever period elapses first.

IMI Cornelius Inc.'s obligation under this warranty is limited to the repair or replacement, including reasonable labor charges, of any part or parts which the purchaser/user returns to IMI Cornelius Inc.'s factory, transportation costs prepaid, and which IMI Cornelius/Wilshire finds to be defective in workmanship and/or material within the warranty period. To be reimbursable under this warranty, labor charges must be submitted to IMI Wilshire within 30 days from the date of service, must be performed by a qualified company acceptable to IMI Cornelius Inc., and must be for reasonable and customary straight time labor charges only. No travel time, mileage, or other charges in excess of straight time charges will be accepted. Any replacement parts must be approved IMI Cornelius Inc. parts. The serial and model numbers and date of original installation of the product must be given.

IMI Cornelius Inc. will accept a part, parts, or equipment freight prepaid and return same freight collect to the sender within the continental U.S. or port of export within the continental limits of the U.S. IMI Cornelius Inc. is not responsible for international freight, customs fees, or duties at country of destination.

ADDITIONAL FOUR YEAR LIMITED WARRANTY ON COMPRESSOR

This warranty shall be effective for a period of four (4) years from the expiration of the above warranty.

The hermetically sealed refrigeration compressor is covered by the above one year limited warranty. In addition to that warranty, if the compressor fails because of a defect in materials or workmanship during the second through fifth year from the date of installation, IMI Cornelius Inc. will repair or, at its option, replace the compressor. Labor charges and the cost of relays, overloads, and capacitors are not included.

THIS WARRANTY DOES NOT COVER DAMAGE CAUSED BY LACK OF PREVENTATIVE MAINTENANCE, IMPROPER INSTALLATION, ACCIDENT, MISUSE, NEGLIGENCE, ALTERATION, FIRE, FLOOD, OR ACTS OF GOD. In those jurisdictions where liability for damages cannot be disclaimed, original purchasers recovery shall not exceed the cost of the warranted product.

IMI CORNELIUS INC. ASSUMES NO LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, SPOILED PRODUCT, LOST PROFITS, OR DAMAGE TO OTHER PROPERTY.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SUPERSEDES AND EXCLUDES ANY ORAL WARRANTIES OR REPRESENTATIONS OR WRITTEN LANGUAGE IN ANY MANUAL, LITERATURE, ADVERTISING BROCHURE OR OTHER MATERIALS NOT EXPRESSLY DESIGNATED IN WRITING AS A "WARRANTY".



IMI CORNELIUS FOODSERVICE GROUP
One Cornelius Place
Anoka, MN 55303
763-421-6120 / 800-238-3600
Fax: 763-422-3255



Allotted Repair Times

Wilshire QLT180/1000-1, 1002-1

The table below will be used by IMI Cornelius Inc. as a STANDARD service call guide to determine fair and reasonable labor charges for warranty repairs. Charges in excess of these rates will be subject to review and/or adjustments.

The labor warranty referenced in the **Certificate of Warranty** in this manual applies to the replacement of the defective part. IMI Cornelius Inc. will not accept labor warranty claims for water leaks applicable to the installation, clogged drains, adjustments of any kind including regulators, pumps, thermostats, ratio or brix settings, stratification issues, preventative maintenance, sanitizing, etc. IMI Cornelius Inc. will consider only actual service time on the equipment. Charges for mileage, holiday pay, night charges, and overtime will not be considered. All labor claims that are fare, reasonable, and within the terms of the warranty and allotted repair times will be paid in U.S. Dollars.

Any questions regarding the warranty procedures can be directed to our Technical Services group at 1-800-238-3600 (763-421-6120 outside the United States).

Item #	Page #	Description	Max HRS.
15	20	*Compressor, R-134a	3
n/a	19	*Dryer	1.5
29	18	*Water Cooling Coil	2.5
21	20	*Refrigeration Solenoid Valve	1.5
n/a	19	Compressor Start Relay	1
n/a	19	Compressor Thermal Overload	1
n/a	19	Compressor Start Capacitor	1
12	29	Thermostat – Concentrate	1
13	29	Thermostat – Water	1
4	30	Start Relay	0.75
11b	29	Voltage Regulator Board	0.75
4	27	Portion Control Board	0.5
5	20	Valve Water Inlet/Strainer	0.75
18	24	Female Quick Connect (Pump Module)	0.5
2	26	Pump Motor W/Protective Boot	1
14	25	Solenoid Dispense Coil	1
19	25	Flow Control	0.5
All	25	Mixing Valve Block Assembly	1
24	18	Transformer	0.75
26	20	Fan Blade	1
3	28	Door Gasket	0.5
7	27	Door Lock/Latch	0.5

*Recovery and pump down require at least two hours depending on contamination and is not included in the allotted repair time shown above.

INSTALLATION

RECEIVING

Each unit is completely tested and inspected before shipment. At time of shipment, the carrier accepts the unit and any claim for damage must be made with the carrier.

Upon receiving from the carrier, please inspect the carton for visible damage. If damage exists, have the carrier make a note on the bill of lading and file a claim with the carrier.

UNPACKING

- Remove staples securing carton to pallet.
- Lift carton up and off of unit.
- Remove top insert and shipping bag.
- Open upper cabinet door and remove installation kit.
- Remove bolts securing unit to pallet.
- Lift unit off of pallet.
- Open the packet, take the legs and secure them to the bottom of the unit.

NOTE: Do not lay the unit on sides or on the back. This may cause vital oils to drain from the compressor resulting in damage during start-up and consequently voiding the warranty.

- Tilt the unit only when securing legs.
- If the unit is to be transported from the place where it was unpacked, do not remove the unit from the pallet. Transport it on the pallet to the installation site.

COUNTER LOCATION

Select a location in a well ventilated area, close to a grounded electrical outlet. If possible do not place the unit close to hot and/or steaming machines.

The minimum clearance is: 4 " (10.16 cm) in back and 12" (30.48 cm) on top and open to the front if sides are blocked off. If sides are open then only 2" (5.08 cm) is required in the back. The space between bottom of the unit and counter cannot be obstructed.

IMPORTANT: Condenser air is drawn in from the bottom and discharged out the back. Failure to maintain clearance space will reduce capacity of the unit and cause premature compressor failure.

CONNECTING WATER SUPPLY

The QLT series Juice Dispensing machine is designed to dispense juice at a high flow rate. It is very important that the incoming water line is dedicated for the unit, or at least does not have other machines connected which could cause a water surge, i.e., a dishwashing machine.

NOTE: The unit should be fed by an insulated chilled water line from the soft drink beverage system. To achieve both optimal brix control and sanitization, assure that the incoming water pressure is at least 40 psi (2.8 bar) dynamic.


IMPORTANT: The water supply should be consistent with proper water quality standard (neutral ph of 7.0 to 8.0), and should not be connected to a water softener. Drink quality may be affected by poor water conditions. Water connections shall be sized, installed, and maintained according to Federal, State, and Local Laws.

1. Secure the 3/8" (.95 cm) swivel nut on the flexible supply hose to the water inlet located on the underside of the unit. Make sure that the seal washer is used (hose and seal washer are included with the installation kit).
2. When securing flare nut, use backup wrench on male side of the inlet fitting (unit side) to prevent twisting of the copper tube inside the unit and/or possible damage to the water strainer/solenoid. A water shut off outside the unit is recommended.

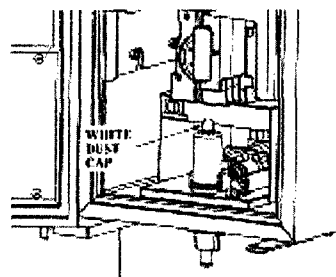
ELECTRICAL

A minimum of 15 amps electrical service is needed for 120VAC power supply or 10 amps for 230VAC supply.

FILLING WATER/FLUSHING SYSTEM

To properly prime the unit with water and remove air pockets in the system, open the cabinet door and make sure the white protective dust cap is in place on top of the mixing chamber. Close the door and push the "cancel/pour"  switch for a few seconds. Repeat until a steady flow of water is observed.

NOTE: Water splashing may occur during this purge cycle.

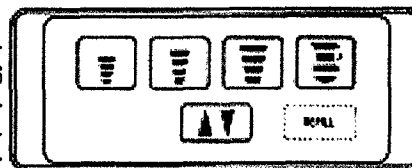



CONCENTRATE EMPTY INDICATOR

The QLT juice dispenser is equipped with the ability to sense when the concentrate is empty. When the refill light on the portion control pad is illuminated, it is time to change the concentrate pouch.

PROGRAMMING THE PORTION CONTROL


The portion control supplied with your orange juiced dispenser has been preprogrammed to pour 7, 12, and 16 ounce drinks. The "extra large" size has also been programmed to pour 16 ounces. Should pour size adjustments be required, please follow the instructions below:



1. Simultaneously, press and hold "small" and "extra large" push button switches on the Portion Control Module until the "REFILL" light in the corner of the module starts blinking. Release the switches. The blinking light indicates the programming mode is active.
2. Place the cup under the white mixing valve nozzle and push the selected size button (small, medium, large, or extra large). **Hold** the button in until the cup fills to the desired portion, then release the button. Repeat the above procedure for the remaining sizes.
3. After programming all the drink sizes, press and release the "cancel/pour"  switch to return the Portion Control to the operational mode. The blinking REFILL light will go out.

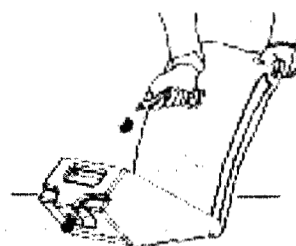
If at a future date it is decided to change the portion size of the drinks, the individual sizes can be adjusted by the above procedure. It is not necessary to reprogram every size. Additionally the portion control has a full memory retention in case of a power failure.

CANCEL/POUR BUTTON

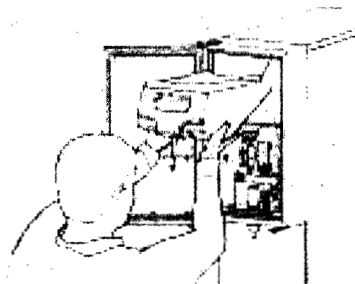
To pour a drink without using a preprogrammed portion control size, simply push and hold the  button. Release when the glass is full.

CONCENTRATE LOADING

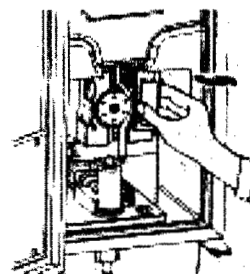
Place the concentrate pouch into the pouch holder and feed the dispense tube through the opening.



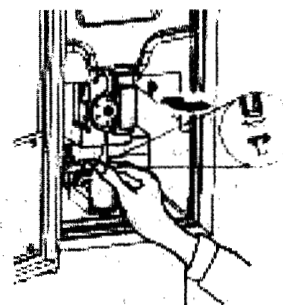
Place the pouch holder on the stainless steel shelf in the dispenser cabinet.



Open the slide block by pulling out on the slide blocks handle and move the block to the right. Position the dispense tube around the right side of the pump rotor as shown.



Close the slide block by moving it to the left and lock into place by pushing in on the handle. Remove the sanitary plug from the dispense tube and press the tube over the fitting on the mixing chamber.



BRIXING PROCEDURE

Check concentrate to water brix ratio weekly. This ratio should be 5 parts of water to 1 part of concentrate.

NOTE: If concentrate is not properly defrosted, it will adversely affect the amount of concentrate dispensed). Thawed product should be between 36°F/2.2°C to 39°F/3.9°C.

SUPPLIES

- 1–Small 12 oz. cup (354.8 ml)
- 1–Large 21 oz. cup (621.1 ml)
- 1–Straw
- 1–Thermometer
- 1–FCOJ Hydrometer
- Paper Toweling

You will also need a screwdriver to turn a screw if brix adjustments are required.

CHECKING/ADJUSTING THE BRIX SETTING

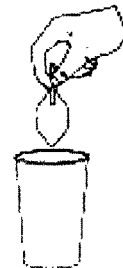
1. Dispense approximately 8 oz. (236 ml) of orange juice into any cup.
2. Check drink temperature with the thermometer (target is 35–45°F, or 1.7–7.2°C). Discard this drink when through.

NOTE: If drink temperature is not within target temperatures, refer to the basic troubleshooting section.

3. Place the hydrometer into a cup of ice water. Allow 2 to 3 minutes to prechill the hydrometer.
4. Dispense a 14–16 oz. (414–473 ml) orange juice sample into a large cup. Mix thoroughly by stirring the sample with a straw.
5. Place clean, empty small 12 oz. (354.8 ml) cup on an area that allows any overflow or spillage to drain away (the dispenser drip tray works very well for this).
6. Pour sample (from large cup) into small 12 oz. cup (354.8 ml) until orange juice overflows the brim.

Remove excess foam from the surface of the drink by sweeping lightly across the surface of the orange juice with a straw.

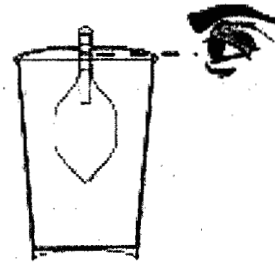
7. Remove hydrometer from ice water and dry thoroughly with a clean paper towel. Proceed immediately to the next step.
8. Hold the hydrometer by the top stem. Lower it's body until it touches the orange juice sample. Drop the hydrometer into the middle of the cup. Let the hydrometer stop moving before reading the scale.



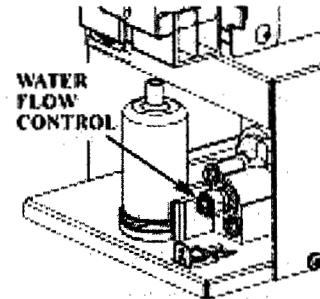
9. Read the hydrometer scale (at eye level) at the top surface of the curved upper surface of the liquid column.



The hydrometer has three readings, one of which will be showings:

- Yellow – Weak, too much water
- Green – O.K., no adjustments
- Red – Strong, not enough water



10. If reading is in the red or yellow area, adjust the brix ratio. To change the brix, simply readjust the water flow rate. Located on the valve assembly inside the refrigerated compartment and facing the operator is the adjusting screw for the water flow rate.



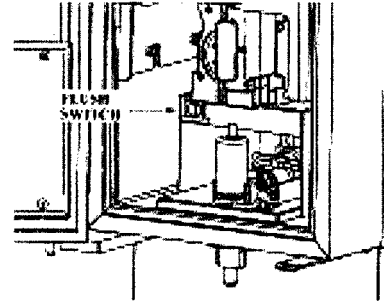
If the reading is Red, add more water to the drink by rotating the adjustment screw clockwise . If the reading is Yellow, reduce the amount of water added to the drink by rotating the adjustment screw counter-clockwise .

Recheck the brix to confirm results.

PLANNED MAINTENANCE SCHEDULE

DAILY

- Flush System:
 1. Place an empty cup on the drip tray. Depress flush switch to the "Flush" position located on the platform assembly in the refrigerated compartment.
 2. Close the door and depress the dispense switch for 2–3 seconds or until clear water is dispensed from the nozzle.
 3. Return the "flush" switch to the "dispense position".



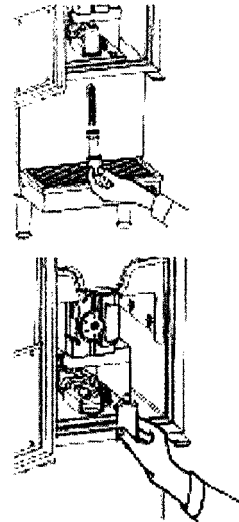
WEEKLY

- Check concentrate to water brix ratio:

This ratio should be 5 parts of water to 1 part of concentrate. If adjustment is necessary, refer to the *Brixing Procedure* section of this manual.

NOTE: If concentrate is not properly defrosted, it will adversely affect the amount of concentrate dispensed). Thawed product should be between 36°F/2.2°C to 39°F/3.9°C.

- Sanitize the Juice Dispenser:
 1. Prepare one packet of McD sanitizing solution according to the instructions on the PM Card.
 2. "Flush" the system by following the instructions in the *Daily* section above.
 3. Remove the nozzle and static mixer from the unit (by rotating 90° and pulling down).
 4. Open the refrigerated compartment and remove the mixing chamber assembly by firmly pulling forward and then down to disconnect the tube.
 5. Rinse the mixing chamber assembly, nozzle, and static mixer in hot water.
 6. Place the mixing chamber assembly, nozzle, and static mixer in the sanitizing solution and agitate vigorously. Allow the parts to soak for two minutes.



CAUTION: Do not soak parts in solution overnight. Additionally, do not wash in a dishwasher.

7. Reinstall the static mixer, nozzle and mixing chamber as shown in steps "3 & 4" above.
8. Dispense a small courtesy cup of juice in order to prime the system and prepare it for operation.
9. Wipe all internal and external surfaces of the cabinet with a clean damp cloth.